



UPDATES FROM THE CMSAA...

by Fran Salyers, Director, Eastern Kentucky University Center for Middle School Academic Achievement

What a great time for middle level education. On the state level, the Center for Middle School Academic Achievement has received continued funding, the state middle school conference offered an outstanding and very relevant program, and the eighth year of the Kentucky Schools to Watch program has begun. While on the national level the National Forum, the group that developed the Schools to Watch program, received one of 49 Investing in Innovation (i3) grants. This grant from the U.S. Department of Education for almost 5 million dollars over 4 years is a developmental grant and provides for the National Forum to fund experiences in 3 states using the Schools to Watch criteria as a tool for school improvement. These states will then become regional hubs for future scale-up efforts. Kentucky, although not one of the three states, will benefit through the sharing of experiences, by participating in some of the trainings, and being involved in

the development of processes and products used in the 3 states. The strength of a developmental grant is that the work is to spread over time.

In the September issue of the Middle School Journal there is an article by Ken McEwin and Melanie Greene that reports their findings from a national survey and draws comparisons to a study of high performing schools. It makes for interesting reading and provides support for the basic tenets for middle level education.

Another nationally published piece of research should be of interest to Kentuckians since it is authored by two Kentucky professors from Northern Kentucky University. Shawn Faulkner and Chris Cook, authors of this case study, have delved into the way two Kentucky Schools to Watch use their common planning time. This research is part of a national research project focusing on common planning time in which Dr. Faulkner and Dr. Cook are involved.

2011 NMSA Conference in Louisville!

A Kentucky committee has been established to prepare in hosting the 2011 National Middle School Association conference in Louisville. This is an opportunity to showcase Kentucky middle schools and students. Kentucky educators can participate in an extraordinary professional development close to home. Kentucky will have a booth at the 2011 Baltimore NMSA conference promoting the 2011 conference in Louisville. If you are attending the NMSA conference in Baltimore and would like to volunteer to work our booth, please contact Fran Salyers at fran.salyers@eku.edu.

CMSAA CREATES WIKISPACE FOR TEACHERS

The Center for Middle School Academic Achievement has launched a new Wikispace! The wikispace is going to be a repository for teachers to share instructional plans, strategies and assessments based upon the new standards.

Visit the CMSAA wikispace at <http://cmsaa.wikispaces.com>

MINIGRANTS AVAILABLE!

The MSU and EKU Centers are funding teacher minigrants to improve academic achievement in middle grade level students. The grants should engage students in critical thinking and problem solving that deepen their knowledge and understanding of Kentucky's core content. Teachers can apply for funding up to \$995. If you would like to apply for a minigrant, you can download an application at each Centers' web site.

<http://www.murraystate.edu/cmsaa.aspx>

<http://www.middle-schoolhouse.eku.edu>

BRAIN-BASED INSTRUCTION: NEUROGENESIS

Courtesy of
www.jensenlearning.com

Today's excerpt deals with Neurogenesis and comes from Eric Jensen whose work on brain-based instruction is particularly geared to success with the middle grades. This article contains good news for all of us - regardless of our age, we can improve our brains!

Without any doubt, one of the top five discoveries, in the history of mind/brain science is neurogenesis. This discovery (Eriksson, et al., 1998) showed that humans can and do produce brand new brain cells, even as we are elderly and dying of cancer. As of this writing, we know that they are being produced in at least three areas of the brain, including the hippocampus. This discovery overturned over 100 years of scientific dogma. It also forced us to modify our outdated paradigm of how our brain works. It is, in fact, far more malleable than we earlier thought.

But that's not the main point...

The real "1-2 punch" behind the discovery of neurogenesis did not happen for several years after the original event. The amazing follow-up discoveries: 1) defined what the functional role of neurogenesis in the brain is, and 2) helped us understand what regulates the process of neurogenesis.

First, it turns out that neurogenesis is highly correlated with learning, mood (Jacobs, et al., 2000) **and memory** (Deng, et al, 2010). That's about as important as you can get in terms of what we expect of kids at school. Those "big three" qualities are the reason WHY we should use strategies and support policies that enhance neurogenesis.

Second, OUR OWN daily behaviors can tell our brain to make fewer cells ("downregulate") or to make more brain cells ("upregulate"). This means that what we do at school can directly influence the brain. But, is there evidence to support this position? And, if there is, what do we do at school to strengthen neurogenesis? I knew you'd ask that question.

Applications

Here are some of the properties of neurogenesis that you should know. The fact that this process exists and is regulated is exciting, but you should know the details.

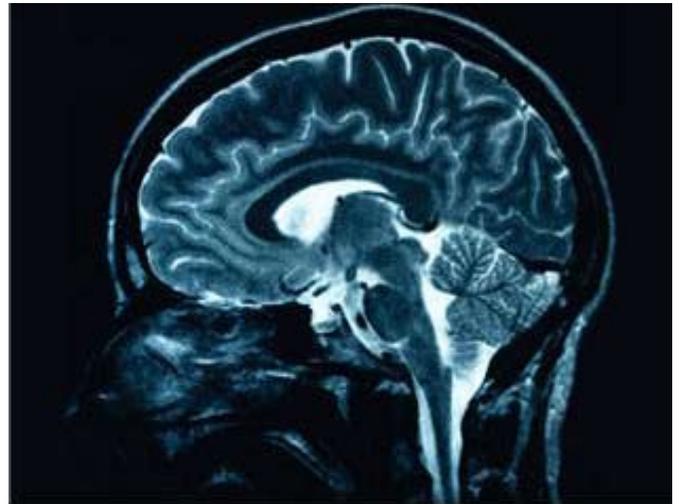
First, neurogenesis is boosted by exercise (Pereira AC, et al., 2007). In the human study, participants did voluntary gross motor activity for almost an hour, four times a week for 12 weeks. We do not know, at this time, whether one hour is the minimum amount of time needed or if half that time period would work just as well.

What does this suggest to us? Schools that reduce or eliminate recess or P.E. are making a serious, brain-changing mistake. There is no evidence, at this time, that diagramming a sentence, learning states and capitals, or reading about Napoleon will build brain cells. Classroom teachers should promote movement and activity, regardless of what the formal school scheduling has arranged.

We know that dietary restriction also increases hippocampal neurogenesis (Kitamura T, et al. 2006). These studies were done over a 12-week period, which suggests that skipping one meal, probably won't turn one into an Einstein.

What does this suggest to us? This fact may be just as important in teaching kids about nutrition as teaching them about their fat intake. This suggests that eating less (if you are eating nutritious foods) can actually support mood and memory. Classroom teachers can help promote "smarter eating" (less food) as well as eating the so-called "brain foods" that are good for the brain.

We know that sleep loss reduces neurogenesis. In fact, prolonged sleep loss can inhibit hippocampal neurogenesis independent of any effects from the stress hormones. (We already know excess cortisol reduces neurogenesis.) Just



minor sleep restriction may interfere with the enhancement of neurogenesis associated with learning processes, but the prolonged sleep disruption may even endanger hippocampal integrity, thereby leading to cognitive dysfunction (ouch!) and contributing to the development of mood disorders (Meerlo, et al., 2009). Sleep can, in fact, help make you smarter and a lot less crabby.

What does this suggest to us? Include parents in the sharing of this information. Remind kids that their brain likes the "down time" even if there's one more Tweet or email.

Jensen Learning is a company that specializes in providing professional development to educators on how to apply brain-based teaching strategies in classrooms. Their strategies are based on principles derived from solid scientific research. Other research in related fields such as social neuroscience, psychoimmunology, behavioral genetics, psychobiology, cognitive science, neuroscience and physiology also play a role in brain-based learning.



CREATING A CULTURE OF SUCCESS AND SUPPORT - DISAGGREGATION AND ANALYSIS OF SCORE DATA

by Sharon Johnson, Kentucky Department of Education

Most successful schools have worked hard to create a supportive environment for their students. Adults in the school building take an active, supportive role with students, ensuring that every student is able to connect with at least one adult in the school building in a positive manner. Adults consistently reinforce a “can do” attitude for students and help them set individual goals for achievement and encourage them to meet those goals.

Another strategy is to set aside time for teams of teachers (content or cross curricular, sometimes teams of grade level teachers) to disaggregate student and school level EPAS scores. Disaggregated scores are then analyzed to identify gaps in teaching and learning and to make the necessary adjustments.

CMSAA FAV LINKS

Using Technology in Education!

- www.wolframalpha.com: a free site that does the thinking for you. Well, at least it asks the questions you might not know to ask. The site advertises itself as the world’s first and only computational knowledge engine. Enter your question or calculation, and Wolfram | Alpha uses its computational power and ever growing collection of knowledge to compute the answer. Discover new information about the world, and integrate expert knowledge into any facet of your life. Middle grade learners especially enjoy entering their first names and/or birthdates to obtain loads of information about each. Try it!
- www.kerpoof.com: a free site that both teachers and students will enjoy. It is a password protected site with interactive graphics that students can use for storytelling, electronic scrapbooking or creating their own avatar. Teachers will find a wealth of free resources for educators on the Kerpoof Scholastics pages, including lesson plans, classroom ideas, and an e-newsletter.

INSTRUCTION INVOLVING STUDENT RESPONSE SYSTEMS

by Meagan Musselman, Ph.D., Assistant Professor of Education, Murray State University

Student response systems are handheld student devices that promote engagement between students and the teacher.

One of the purposes of this technology is to help teachers appropriately pace their instruction to maximize student achievement and not be surprised by the level of understanding of their students.

They allow students to submit answers to questions posed by the teacher during a lecture or discussion, and the instantaneous posting of results allows the teacher to gauge student understanding or misconceptions.

Through direct instruction, the teacher is often providing content in a more traditional approach such as lecturing. Student response systems allow teachers to use traditional methods such as lecturing while increasing student engagement and therefore student achievement. In many classrooms where the teacher is using direct instruction, attempts of asking questions that will trigger feedback from the students often fail. The students are usually embarrassed about stating an incorrect answer in front of their peers or they are disengaged from the lesson altogether. Student response systems allow all students to respond anonymously with only class totals being displayed. The teacher is then able to analyze the level of understanding on a particular concept within a matter of seconds.

This technology can transform traditional direct instruction methods! It adds the engagement component which is often missing. Students are more likely to pay attention knowing that they will be asked to input an answer or opinion on a particular topic at any moment. However, they are not paying attention to the lesson due to the fear of being called on. Rather, they are paying attention because they have an active role in the learning process.

